



Memorandum

To: *Stephanie Vaughn (USEPA)
Elizabeth Buckrucker (USACE)*

From: *Scott Kirchner (CDM Smith)
George Molnar (CDM Smith)*

Date: *March 6, 2013*

Re: *Status Report (March 2013)
CPG Oversight of Chemical Water Column Monitoring High Flow Event
Lower Passaic River Restoration Project*

On behalf of the United States Environmental Protection Agency (EPA) and the United States Army Corps of Engineers (USACE), Kansas City District, CDM Federal Programs Corporation (CDM Smith) is providing oversight of the Cooperating Parties Group (CPG) remedial investigation/feasibility study (RI/FS) field activities associated with chemical water column monitoring (CWCM), and the collection of chemical data in the Lower Passaic River (LPR).

CDM Smith oversight activities were conducted February 27, 28, and March 4, 2013. Oversight included observations of the collection of samples from select river miles (RMs) in the LPR and Third River taken during the first of two proposed high flow events. In addition, CDM Smith also collected split samples at select locations. All activities were conducted in accordance with the CPG *Quality Assurance Project Plan/Field Sampling Plan Addendum (QAPP/FSP), Remedial Investigation Water Column Monitoring/Small Volume Chemical Data Collection*, Revision 2, August 2011.

Photographs of field activities are in Attachment 1. Copies of the logbook notes are in Attachment 2. Copies of chain of custody records are in Attachment 3.

General Summary

Oversight consisted of observations of in-river and field facility activities conducted by CPG contractors AECOM. Ocean Surveys Incorporated (OSI) provided vessel and sampling support.

All sample locations were verified by oversight staff using the map provided in CPG's QAPP/FSP. Review of the United States Geological Survey (USGS) gauging station at Dundee Dam indicated that flows slightly exceeded the required rate of 3000 cubic feet per second (cfs) to be considered a high flow event.

In summary, the following locations were sampled during this event:

- Dundee Dam
- RM 0
- RM 1.4
- RM 4.2

- RM 6.7
- RM 10.2
- Saddle River
- Second River
- Third River

For this sampling event, CDM Smith accepted split samples from the following locations taken over the course of the rising, peak, and falling hydrograph:

- Third River (during second rising limb and peak of the hydrograph)
- RM 6.7 (during peak of the hydrograph)
- RM 10.2 (during first rising limb, peak, and falling limb of the hydrograph)

Throughout each day, samples were collected and shuttled back to the CPG facility for processing and packing. Oversight of activities at the CPG field facility indicated a relatively organized system of sample logging, labeling, chain of custody generation, and packing given the large volume of samples and bottleware involved. All sampling packing activities were conducted in accordance with AECOM's QAPP.

Summary of Daily Activities

The following is a summary of daily activities observed during CDM Smith's oversight of CWCM activities:

February 27, 2013

Oversight staff observed field activities at the Third River during the second rising limb and peak of the hydrograph sampling events. Spilt samples were also collected during these two events. The first rising limb event occurred late the previous night during which no oversight was conducted.

Initially it was thought that oversight crews would be allowed to accompany CPG on their vessels to locations on the LPR. However, due to the number of field staff and vessel size, oversight staff were unable to accompany field crews to RM 10.2, a targeted location for split samples. This was a last minute notification and all other vessels departed, so CDM Smith transferred split sample bottle sets to CPG for filling. Splits were collected during the first rising limb event at RM 10.2 from both sample intervals (three feet below surface and three feet above river bottom). Other CPG crews sampled at all other locations on the LPR. The second rising limb sampling event on the LPR occur late in the night. No oversight was conducted.

February 28, 2013

Oversight staff observed the collection of surface water samples during the peak event at RMs 4.2 and 6.7. Spilt samples were collected from RM 6.7 and 10.2. Oversight crews were unable to accompany crews to the RM 10.2 location due to the size of the vessel.

March 4, 2013

Oversight staff observed field facility activities and accepted a split sample from RM 10.2 taken during the falling limb of the hydrograph.

Both CDM Smith's split samples and corresponding CPG samples are presented in Table 1. Copies of CDM Smith's signed chain of custodies can be found in Attachment 3.

QAPP Compliance

All field activities were conducted in accordance with QAPP procedures.

Table 1
Cooperating Parties Group and CDM Smith Split Sample Identification
Chemical Water Column Monitoring High Flow Event 1 Oversight
Lower Passaic River Restoration Project
Lower Passaic River, New Jersey

Location	CPG Sample ID	CDM Split Sample ID	QC Samples	Hydrograph Event	Collection Date	Analysis
Third River	12C-CE12-T3R1-AS	12C-CE12-T3R1-AS-C		second rising limb	2/27/2013	PAH/Alkyl PAHs, pesticides, PCB congeners, PCDD/PCDF, metals plus Ti (total and dissolved), mercury (total and dissolved), methyl mercury (total and dissolved), hexavalent chromium (dissolved), TOC, DOC, POC, SSC, TDS
RM 10.2	12C-CE11-T102-BS	12C-CE11-T102-BS-C		first rising limb	2/27/2013	
Third River	12E-CE20-T3R1-AS	12E-CE20-T3R1-AS-C	MS/MSD **	peak	2/27/2013	
RM 10.2	12C-CE11-T102-AS	12C-CE11-T102-AS-C		first rising limb	2/27/2013	
RM 6.7	12C-CE20-T067-BS	12C-CE20-T067-BS-C		peak	2/28/2013	
RM 6.7	12C-CE20-T067-BS	12C-CE20-T067-BS-CX	Duplicate *	peak	2/28/2013	
RM 10.2	12C-CE20-T102-AS	12C-CE20-T102-AS-C		peak	2/28/2013	
RM 10.2	12C-CE21-T102-AS	12C-CE21-T102-AS-C		falling limb	3/4/2013	

CPG - Cooperating Parties Group

DOC - dissolved organic carbon

ID - identification

MS/MSD - matrix spike/matrix spike duplicate

PAH - polycyclic aromatic hydrocarbon

PCB - polychlorinated biphenyl

PCDD/PCDF - polychlorinated dibenzodioxins/polychlorinated dibenzofurans

POC - particulate organic carbon

QC - quality control

SSC- suspended solids concentration

TDS - total dissolved solids

Ti - titanium

TOC - total organic carbon

* - field duplicate sample of CDM split sample 12C-CE20-T067-BS-C

** - MS/MSD only for PAH/Alkyl PAHs, total and dissolved mercury and methyl mercury, dissolved hexavalent chromium, TOC, POC and DOC

Attachment 1
Photographs of Field Activities



Photo 1 – Clean tubing used for sampling

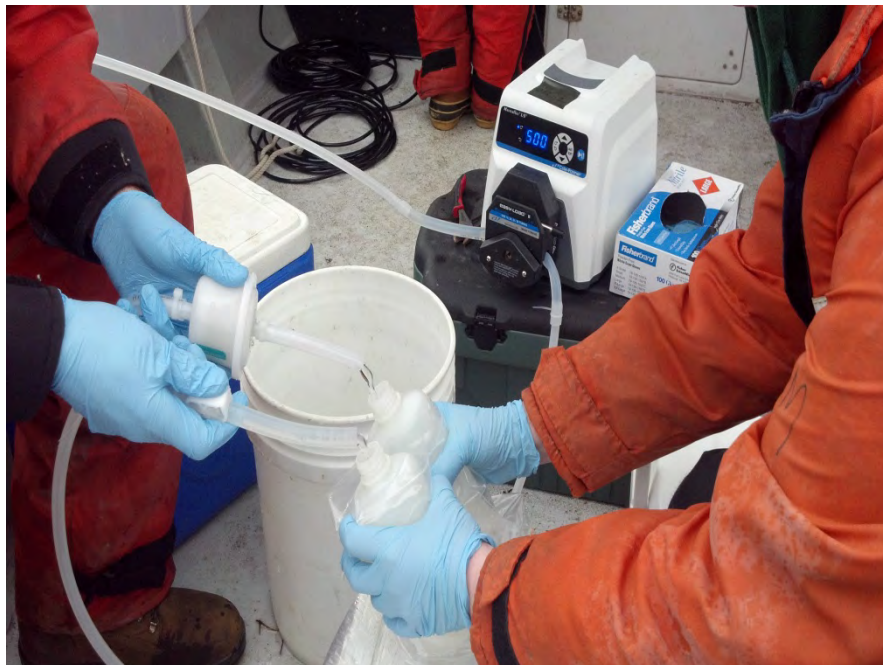


Photo 2 – Sample collection



Photo 3 – Preparing bottleware for packing



Photo 4 – Cooler preparation for sample shipment



Photo 5 – Collection of water quality data in real-time at the Third River



Photo 6 – Rinsate blank collection

Attachment 2

Copies of Oversight Field Logbook Notes

Date 2/28/13

USACE

CWCM oversight/split sample

220-Board Boat To go take peak
samples at River marker 6.7 and 4.2

1250 - ARRIVE at marker 6.7.

1303 pump is at 14.45 ft and
Total Depth is 17.45 ft

1310 sample Time

1400 Finish sampling Bs

Pull Pump up to 3ft BWS

1421 START sampling AS

1445 - Sampling Complete

1510 - J. Rakowski KI picks up our samples
to take back to CDM warehouse and process.

We will wait Here at Burger King UNTIL someone FROM AECOM PICKS UP THERE SAMPLES, we will Head To marker 4.2 Then.

1530 - Samples secure Head To marker 4.2

1550 - at 4.2. Begin setup for sampling

602 sample time from 12.1 fPBWS

TOTAL TO BOTTOM IS 15.1 FT BTWS

1627- FINISH SAMPLING, REPLACE TUBING
AND BRING UP TO 3 FT BWS.

1637 - sample time

1658 - Finish Sampling

1815 OFFSITE
2/28/13 Ed. Conner

Location

Date _____

Project / Client

Location Lower Passaic River Date 12/10/12
 Project / Client USACE CWCN
Panther Hunt 5 C. Molen notes

@ PM 10.2

1200 G.M. Departs CP6 Facility

(A)

Location Lower Passaic River Date 2-27-13
 Project / Client High Flow
12C-CE12-T3R1-AS-C

PRE: Modified Level D

~~12-27-13~~

Weather: 35°F - rain

Personnel: JR CDM-Smith

Objective: Collection of
 12C-CE12-T3R1-AS-C

* 0700 Start pump and
 accept split samples
 0800 pump off

0830 Bring supplies up
 hill into vehicles

* This sample is the second
 sample of the rising limb.

0915 Arrive at CP6 boat
 ramp and hand off sample
 and duplicate. No room

was on boat for CDM-Smith
 0940 EK departs site to
 bag ice and mark samples.

0950 JR arrives back at
 CP6 facility

* 1027 12C-CE11-T102-B5-C

* 1030 12E-CE20-T3R1-AS-C

Sample time

LR 2-27-13

Location LPR Date 2-27-13
 Project / Client High Flow event

1130 JR arrives at CPG facility. JR is awaiting samples at RM 10.2 JR will create Scribe COC's, sample labels, and airbills.

1500 RM 10.2 crew arrives at facility. JR will check with them regarding samples.

1305 12C-CE11-T102-AS-C sample time

1530 JR departs CPG facility and heads to Edison warehouse to pack up samples.

J.R.

2-27-13

Location LPR Date 2-28-13
 Project / Client High Flow event

DPE! Modified Level D

weather: 45°F

Personnel: JR and EK of CDM Smith

1030 CDM Smith arrives onsite.

Sample IDs are below for upcoming samples.

12C-CE11-T102-AS

J.R. 2-27-13

12C-CE20-T067-BS + Duplicate

Monday 5 12C-CE21-T102-AS

1045 CDM-Smith is informed that the estimated 1300

sample time is now 1300, 1200 CDM-Smith arrives at CPG boat ramp. EK boards boat in order to split

samples at RM 6.7 Peak AS sample. JR heads to CPG facility to create COC's, airbills, and labels.

1310 12C-CE20-T067-BS and

Duplicate, 1420 JR completes COC's

J.R. 2-27-13

Location

LPR

Date

2-28-13

Project / Client

High Flow event

J. Rukowski

1 PPE! Modified Level D
 Weather! 50°F 2-28-13

airbills, and sample labels. JR sent them to printer in Edison Office, JR will

check in on the status of the RM 10.2

Peak AS samples.

1500 JR arrives at burger king parking lot in Kearny to receive samples from EK

1 1530 Arrive at CPG facility.

1600 Receive RM 10.2 sample

* 1605 RM 10.2 Peak sample

1605 Leave CPG facility to head to Edison Warehouse.

J.R.

2-28-13

Location

LPR

Date

3-4-13

Project / Client

High Flow Event

J. Rukowski

PPE! Modified Level D

weather! 25°F

personnel! JR (CRM-Smith)

Objective! Continuation of High Flow event.

0720 JR arrives onsite and hands RM 10.9 bottles to Katelyn at boat ramp

0800 JR sets up computer in CPG facility to

create COCs and airbills

1030 JR completes COCs, airbills

and oversight report

updates

1200 JR receives samples

and departs site.

J.R.

3-4-13

Attachment 3
Copies of Signed Chain of Custodies

[illegible]

Cooler #:

Lab Phone: 8883730881

Special Instructions:	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	J.R.	2-28-13									

Items/Reason	Relinquished by	Date	Received by	Date	Time
	S.R.	3-4-13			

AirbillNo: Hand Deliver

CHAIN OF CUSTODY RECORD

Passaic - F2L

Case Complete: False

Cooler #:

No: 2-022713-135431-0020

Lab: EPA-DESA laboratory

Lab Address: 2890 Woodbridge Ave

Lab Phone: 7323216707

[illegible]

Special Instructions:	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

[illegible]

[illegible]

[illegible]

[illegible]

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	J.R.	2-27-13									

Cooler #:

Lab Phone: 2197698378

[illegible]

[illegible]

[illegible]

[illegible]

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	J.R.	2-28-13									

